

REMARKS

The Office Action asserted a restriction requirement, withdrew claims from consideration, objected to claims and rejected claims. Applicant cancelled claims 5, 13, 15, 19 and 21; amended claims 1, 6, 9, 14, 16, 18 and 22; and added new claims 26-30. Claims 1-4, 6-12, 14, 16-18, 20 and 22-30 remain. Applicant requests that the Examiner reconsider and withdraw the rejections.

Election/Restriction

The Office Action asserted a restriction requirement between Invention I, claims 1-17, drawn to a brush seal and an apparatus, and Invention II, claims 18-25, drawn to a method of cooling a brush seal. The undersigned confirms the provisional election, with traverse, of Invention I, claims 1-17, during the telephone conversation with the Examiner.

Applicant seeks to overcome the restriction requirement by modifying method claim 18 to conform to apparatus claim 9. Such a modification includes, *inter alia*, canceling dependent claim 21 and inserting such feature into independent claim 18. With the claims as now amended, the one-way distinctness required by M.P.E.P. § 608.05(h) no longer exists. The method, as claimed, cannot be practiced with another materially different apparatus since method claim 18 recites the features of apparatus claim 9 (e.g. a "first component," a "second component," a "brush seal," and an "opening in [the] second component"). In addition, the apparatus, as claimed, cannot be used in a materially different process since apparatus claim 9 mentions the steps of method claim 18 (e.g. a brush seal "mounted" on the first component and an opening in the second component for "discharging" cooling flow to the brush seal). Applicant requests that the Examiner reconsider the restriction requirement, and rescind the withdrawal of claims 18-25 from consideration.

Claim Objections

The Office Action objected to claim 5 for being unclear. In light of Applicant inserting the feature of dependent claim 5 into independent claim 1, the objection is now moot. Applicant requests that the Examiner reconsider and withdraw the objection.

The Office Action objected to claim 6 for not specifying the specific passageway. Applicant respectfully disagrees. Applicant points out to the Examiner that claim 6 states that the first component passageway is in communication with the second ends of the passageways "of said brush seal." (Emphasis Added). Applicant believes that the claim, as written, clearly specifies the brush seal passageway. Applicant requests that the Examiner reconsider and withdraw the objection.

Claim Rejections - 35 U.S.C. § 102

The Office Action rejected claims 1-10 and 15-17 as being anticipated by United States Patent Number 6,533,284 to Aksit *et al.* ("Aksit"). With respect to the rejection of claims 1-8, Applicant modified independent claim 1 to recite, *inter alia*, a "multiple stage" brush seal with "passageways ... corresponding to ... respective ... brush packs." Aksit merely discloses a single stage brush seal. None of the remaining references provide a motivation for such a modification. Applicant requests that the Examiner reconsider and withdraw the rejection of claims 1-8.

With respect to the rejection of claims 9, 10 and 15-17, Applicant cancelled dependent claim 13 and added such feature into independent claim 9. As such, the rejection of claims 9, 10 and 15-17 by Aksit must be withdrawn.

Claim Rejections - 35 U.S.C. § 103(a)

The Office Action rejected claims 11 and 12 as being unpatentable over Aksit. As discussed above, Applicant cancelled dependent claim 13 and added such feature into independent claim 9. As such, the rejection of claims 11 and 12 over Aksit must be withdrawn.

The Office Action rejected claims 13 and 14 as being unpatentable over Aksit in view of United States Patent Number 6,343,792 to Shinohara *et al.* ("Shinohara"). Applicant asserts that the Office Action failed to establish a *prima facie* case of obviousness¹. A *prima facie* case of obviousness has three criteria. One criterion requires a suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to combine reference teachings. M.P.E.P. § 2142. Applicant believes the Office Action did not provide a valid motivation to combine the Aksit and Shinohara.

Aksit describes (*see, e.g.*, Figures 2 and 5) a brush seal having cooling passages through the brush seal. Shinohara describes (*see, e.g.* Figure 20A) a leaf seal that has openings 520c in the ring portion 520a to provide airflow to separate the leaves from the shaft. Shinohara does not disclose or suggest that the openings 520c provide cooling flow to the brush seal as recited in claim 9. For at least this reason the rejection was improper and must be withdrawn.

Furthermore, modifying Aksit as taught by Shinohara may render Aksit unsuitable for its intended purpose. No motivation for the proposed modification can exist if it renders the prior art invention unsatisfactory for its intended purpose. M.P.E.P. § 2143.01. Aksit describes a brush seal 30, in

¹ As discussed earlier, Applicant cancelled dependent claim 13 and inserted such feature into independent claim 9.

which the bristles 40 extend from the stationary component 32 and contact the rotating component 34. Shinohara describes a leaf seal, in which the openings 520c provide airflow to separate the leaves from the shaft. Removing the bristles from contact with the shaft defeats the intended purpose of a brush seal - to close the gap between a stationary and rotating component. For at least this reason, the rejection was improper and must be withdrawn. Applicant requests that the Examiner reconsider and withdraw the rejection.

Other Claim Amendments

Applicant made several changes to the claims that were neither made for reasons related to patentability nor in response to an objection or rejection in the Office Action. Specifically, Applicant cancelled dependent claims 15 and 19 as being inconsistent with the changes made to independent claims 9 and 18; made changes to claim 6 to conform to the changes made to claim 1; and changed the dependency of claims 14, 16 and 22 to depend from non-cancelled claims.

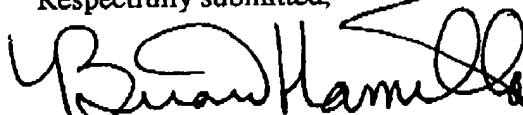
Newly Added Claims

Applicant added new claims 26-30. Support for the newly added claims appears in the disclosure as originally filed. Support for claim 26 appears, for example, in Figures 2 and 3; support for claims 27 and 28 appears, for example, in paragraph 37 of the specification; and support for claims 29 and 30 appears, for example, in paragraph 38 of the specification and Figure 4.

Conclusion

In light of the foregoing, Applicant submits the claims are now in condition for allowance. Applicant requests that the Examiner reconsider and withdraw the objections and rejections. Applicant solicits the allowance of claims 1-4, 6-12, 14, 16-18, 20 and 22-30 at an early date.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Brian J. Hamilla". The signature is stylized with a large, sweeping "B" and a long, horizontal stroke extending to the right.

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